EXPRESS EV 405245916 US

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

HARTNACK, Wolfgang
DEUTSCHE THOMSON-BRANDT GMBH
European Patent Operations
Karl-Wiechert-Allee 74
D-30625 Hannover
ALLEMAGNE

Ha

THOMSON multimedia
RECEIVED
14. März 2005
Patent Department
Administration - Hannover

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing *(day/month/year)*	11.03.2005 IPER/SW
Applicant's or agent's file reference PD020111	**IMPORTANT NOTIFICATION**

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/EP 03/13172	24.11.2003	02.12.2002

Applicant
THOMSON LICENSING S.A. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:

European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Eriksson, I

Tel. +49 89 2399-2432

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PD020111	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP 03/13172	International filing date *(day/month/year)* 24.11.2003	Priority date *(day/month/year)* 02.12.2002
International Patent Classification (IPC) or both national classification and IPC H04S1/00		
Applicant THOMSON LICENSING S.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand 19.06.2004	Date of completion of this report 11.03.2005
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Meiser, J Telephone No. +49 89 2399-7966

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP 03/13172

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-12 as originally filed

Claims, Numbers

1-4 filed with telefax on 04.02.2005

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description, pages:

   ☐ the claims, Nos.:

   ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-4
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-4
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-4
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item I

Basis of the report

Amended claims 1 and 3 are based on respective original claims 1 and 3 and on the description, page 3, lines 14-21 and lines 27-32, page 6, lines 19-21 and figures 2 and 3;
new claims 2 and 3 correspond to original claims 2 and 3;

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

   D1: WO 98/55998 A (KONINKL PHILIPS ELECTRONICS NV ;PHILIPS SVENSKA AB (SE)) 10 December 1998 (1998-12-10)
   D2: PATENT ABSTRACTS OF JAPAN vol. 1996, no. 06, 28 June 1996 (1996-06-28) -& JP 08 031096 A (MATSUSHITA ELECTRIC IND CO LTD), 2 February 1996 (1996-02-02)
   D3: EP-A-1 021 044 (THOMSON BRANDT GMBH) 19 July 2000 (2000-07-19)
   D4: PATENT ABSTRACTS OF JAPAN vol. 2002, no. 06, 4 June 2002 (2002-06-04) -& JP 2002 044543 A (ALPINE ELECTRONICS INC), 8 February 2002 (2002-02-08)

2. The application relates to a method (claim 1) and apparatus (claim 3) for processing two or more decoded audio signals with different number of channels and/or different channel configurations and which are combined before being presented in a final channel configuration.

3. Claims:

   The document **D1** is regarded as being the closest prior art to the subject-matter of independent **claims 1 and 3.**

3.1 With regard to **claim 1**, document **D1** and shows (the references in parentheses applying to this document):

   Method for processing two or more initially decoded audio signals (cf. page 3, line

32 - page 4, line 9 and figure 1; the demultiplexer performs the decoding of at least two channels whereby both a linear PCM encoded signal and a MPEG encoded audio signal is available) received or replayed from a bit stream, that each have a different number of channels and/or different channel configurations (cf. page 4, lines 7; linear PCM or MPEG configuration), whereby either the PCM encoded audio signal or the MPEG encoded audio signal is selected for further processing (cf. page 4, lines 10-18; either the linear PCM signal configuration or the MPEG signal configuration is selected) before being presented in a final channel configuration, whereby said switching/selection is controlled such that in case of non-matching number of channels and/or non-matching types of channel configurations the number of the channels to be output and/or the configuration type of the channels to be output following said switching/selection is determined by related specific switching/selection information (the audio signal information supplied from the keys) provided from a content provider or broadcaster.

The subject-matter of **claim 1** differs therefrom in that

- the audio signals..., that each have a different number of channels and/or different channel configurations, and that are combined by mixing and/or switching;
- to each one of said initially decoded audio signals a corresponding specific channel configuration information item is attached;
- in case of non-matching number of channels and/or non-matching types of channel configurations the number of channels to be output and/or the configuration type of the channels to be output following said mixing and/or said switching is determined by related specific mixing and/or switching information provided from a content provider or broadcaster and that is embedded in said bitstream;
- to the combined data stream to be presented a correspondingly updated channel configuration information item is attached.

The problem to be solved by the present invention may therefore be regarded as: Handling of channel configuration conflicts such that the presenter can replay sound with the correct or the desired channel assignment.

The use of corresponding specific channel configuration information as indicated above is neither known nor rendered obvious by the available prior art documents (D1-D4).

In particular, in **D1** only one of the audio signals is selected by a demultiplexer, whereas the other audio signal is completely muted (cf. figures 1 and 2 and page 2, lines 4-5). In D1 only one audio signal is processed and presented at a time.

Document **D2** describes an audio data coding recorder and audio data decoding reproducing device whereby an audio data stream is distributed/allocated by a data switch based on a control signal to respective audio data decoding means to be outputted to prescribed signal channels (cf. abstract and figure 7) without attaching correspondingly updated channel configuration information.

Document **D3** indicates a method and apparatus for encoding or decoding audio or video frame data whereby the encoding/decoding parameters become linked at the input of the processing with frames of the video/audio data to be encoded/decoded in order to avoid encoding/decoding of invalid output data without reset (cf. figures 1 and 2).

Document **D4** contemplates a digital broadcast receiver that can easily retrieve a channel similar to a channel that is under viewing (cf. abstract).

Therefore, the subject-matter of **claim 1** meets the requirements of Articles 33(2) and 33(3) PCT concerning novelty and inventive step.

3.2 Independent apparatus **claim 3** corresponds closely to independent method claim 1 in that claim 3 defines a respective structural feature to each method step of claim 1.
Therefore, the subject-matter of **claim 3** meets the requirements of Articles 33(2) and 33(3) PCT concerning novelty and inventive step.

4. **Claims 2 and 4** are dependent on respective independent claims 1 and 3 and as such also meet the requirements of the PCT with respect to novelty and inventive step (Art. 33(2) and 33(3) PCT).

5. The industrial applicability is given for the subject-matter of all claims in an obvious manner, Art. 33(4) PCT.

6. **Remarks concerning lack of clarity of the claims, Art. 6 PCT:**

6.1 To meet the requirements of Rule 5.1(a)(ii) PCT, a discussion of the disclosure of document D1 should have been introduced in the description.

6.2 Independent claim 3 is not in the two-part form in accordance with Rule 6.3(b) PCT, with those features known in combination from the prior art (document D1) being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

6.3 There appears to be an error in figure 2; the second decoder (item "22") refers to a "2.0 stereo" audio signal which should have been marked as "L2,R2".

Claims

1. Method for processing two or more initially decoded (21, 22, 23) audio signals received or replayed from a bitstream, that each have a different number of channels and/or different channel configurations, and that are combined by mixing (27) and/or switching (28) before being presented (20) in a final channel configuration, wherein to each one of said initially decoded audio signals a corresponding specific channel configuration information item (ChannelConfig) is attached and the channel configuration information items for said two or more initially decoded audio signals can demand channel configurations conflicting with each other, characterised in that said mixing (27) and/or switching (28) is controlled such that in case of non-matching number of channels and/or non-matching types of channel configurations the number of the channels to be output and/or the configuration type of the channels to be output following said mixing and/or said switching is determined by related specific mixing and/or switching information (278) provided from a content provider or broadcaster and that is embedded in said bitstream,
and in that to the combined data stream to be presented a correspondingly updated channel configuration information item is attached (30).

2. Method according to claim 1, wherein said bitstream has MPEG-4 format.

3. Apparatus for processing two or more initially decoded audio signals received or replayed from a bitstream, that each have a different number of channels and/or different channel configurations, and that are combined by mixing and/or switching before being presented in a final channel configuration,

wherein to each one of said initially decoded audio signals a corresponding specific channel configuration information item (ChannelConfig) is attached and the channel configuration information items for said two or more initially decoded audio signals can demand channel configurations conflicting with each other, said apparatus including:

- at least two audio data decoders (21, 22, 23) that initially decode audio data received or replayed from said bitstream;
- means (24-28) for processing the audio signals initially decoded by said audio data decoders, wherein at least two of said decoded audio signals each have a different number of channels and/or a different channel configuration, and wherein said processing includes combination by mixing (27) and/or switching (28);
- means (20) for presenting the combined audio signals in a final channel configuration,

wherein in said processing means (24-28) said mixing (27) and/or switching (28) is controlled such that in case of non-matching number of channels and/or non-matching types of channel configurations the number of the channels to be output and/or the configuration type of the channels to be output following said mixing and/or said switching is determined by related specific mixing and/or switching information (278) provided from a content provider or broadcaster and that is embedded in said bitstream;
means (30) for attaching to the combined data stream fed to said presenting means (20) a correspondingly updated channel configuration information item.

4. Apparatus according to claim 3, wherein said bitstream has MPEG-4 format.